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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,254	03/24/2004	Ernest Eisenhardt Bergmann	CIRC.014	4224
20987	7590	03/26/2007	EXAMINER	
VOLENTINE FRANCOS, & WHITT PLLC ONE FREEDOM SQUARE 11951 FREEDOM DRIVE SUITE 1260 RESTON, VA 20190			ABDIN, SHAHEDA A	
			ART UNIT	PAPER NUMBER
			2609	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/26/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/808,254	BERGMANN ET AL.
	Examiner	Art Unit
	Shaheda A. Abdin	2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 24 March 2004.  
 2a) This action is FINAL. 2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-28 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-28 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 24 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date: _____	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Specification***

1. The disclosure is objected to because of the following informalities:

On page 1, in paragraph [0010], line 2, delete "Attorney Docket Number" and replace by "patent application number". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-22 and 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hernday et al. (US patent No: 5041997).

As shown in fig. 2C and 13, Hernday et al discloses an apparatus and method comprising:

(1) Regarding claim 1:

a first output port (12<sub>1</sub>) configured to output a first reference test signal;

a first input port (12<sub>2</sub>) configured to input a second reference test signal,

a second output port (port from MACH-Zehnder optical modulator) configured to output a first stressed test signal (an optical isolator, a polarization controller and a MACH-Zehnder optical modulator is using as an attenuator, therefore, output signal from this section is considered as a first stress test signal), wherein the second

reference test signal is based on the first reference test signal and the first stressed test signal is based on the second reference test signal (first output from output port 12<sub>1</sub> considered as first reference test signal and first reference test signal is an input at input port 12<sub>3</sub> to give a second reference test signal; this signal is modulated at attenuating medium and give a stress test signal (column 3, lines 46-55, column 4, lines 25-36, and fig. 2C)

(2) Regarding claim 2:

Wherein at least one of the first reference test signal, the second reference test signal, and the first stressed test signal is an optical signal (column 4, lines 1-8).

(3) Regarding claim 3:

Wherein at least one of the first output port, the first input port, and the second output port is a fiber optic port (column 2, lines 15-23).

(4) Regarding claim 4:

Wherein the first reference test signal (signal from input port 12<sub>3</sub>) is modulated to output the second reference test signal (column 7, line 3-10, and fig. 2C).

(5) Regarding claim 5:

Wherein the first reference test signal and the second reference test signal are modulated at different frequency (optical beam carries a modulation component at the difference frequency) (column 4, lines 46-50);

the first reference test signal and the second reference test signal carry the same data (first output from output port 12<sub>1</sub> considered as first reference test signal and first reference test signal is an input at input port 12<sub>3</sub> to give a second reference test

signal, therefore, both reference test signal would substantially carry the same data) (column 3, lines 46-55, and fig. 2C).

(6) Regarding claim 6:

Wherein the first reference test signal and the second reference test signal are modulated at the same wavelength; and the first reference test signal and the second reference test signal carry substantially the same data (first output from output port 12, considered as first reference test signal and first reference test signal is a input at input port 12, to give a second reference test signal, therefore, both reference test signal would be substantially carrying the same data and it would be inherent to modulate at the same wavelength because they are carrying the same data and modulated in the same modulator) ( column 3, lines 46-55, column 4, lines 25-35, and fig. 2C).

(7) Regarding claim 7:

Wherein the first reference test signal is generated at the internal transmitter (light wave analyzer has an internal source, column 2, lines 55-69, it is assumed that internal source is a combination of an internal transmitter).

(8) Regarding claim 8:

Further comprising stressing medium (MACH-Zehnder optical modulator, working as an attenuator), wherein the second reference test signal is stressed at the stressing medium to output the first stressed test signal from the stressing medium ( the modulated output from the MACH-Zehnder optical modulator is outputting as a first stressed test signal).

(9) Regarding claim 9:

Wherein the stressing medium stresses the second reference test signal by at least one of: attenuating the second reference test signal, creating dispersion in the second reference test signal; and creating interference with the second reference test signal (the modulated output from the MACH-Zehnder optical modulator is outputting as an attenuating test signal) ( column 3, lines 46-55, column 4, lines 25-36, and fig. 2C).

(10) Regarding claim 10

Wherein the apparatus monitors at least one of the first reference test signal, the second reference test signal, and the first stressed test signal (attenuation, that means transmission and reflection characteristic of a (DUT) device under test are displayed on a cathode ray tube 20) (column 5, lines 6-15 and fig. 2C).

(11) Regarding claims 11 and 12:

Wherein the apparatus comprises a first switch (32, column 5, lines 16-26), an internal transmitter (according to fig 2, we can see that an internal optical source (14) is incorporated in the configuration, therefore, it will be inherent that the system has an internal transmitter) (column 2, lines 54-60 ), and a stressing medium (MACH-Zehnder modulator) (column 4, lines 30-36).

the internal transmitter is coupled to the first output port (12<sub>1</sub>) through the first switch (32), when the first switch is in a first switching state (switch states are random and follow a finite state; each state of the switch has an associated finite set, which can also be called processing modes because the optical switch being configured by the instrument control means to select the laser and the configurable switch matrix is connected by the instrument controller in response to selection of a measurement by a

user to facilitate calibration of, and test measurements of devices under test with, (see the abstract) (column 8, lines 6-16, fig. 2C and fig. 5).

the internal transmitter is coupled to the stressing medium (MACH-Zehnder optical modulator) through the first switch (32) when the first switch is in a second switching state (column 8, lines 6-16, and fig. 2C ) (also see the abstract).

(12) Regarding claim 13:

A second input port (12<sub>2</sub>) configured to input a second stressed test signal, a third output port (in fig 2C, the opposite end of input port 12<sub>2</sub> in section 1 can be considered as a third output port ) configured to output a third stressed test signal; a third input port (in fig. 2C, section S9, input at point 'b' can be considered as third output port) configured to input a fourth stressed test signal. (see fig 13, we can see how the input signal is outputted as an stress test signal) (also see column 5, lines 64-68, column 6, lines 1-2 , column 453, lines 44-45);

(13) Regarding claim 14:

Wherein the third stressed test signal and the fourth stressed test signal are the same (in fig. 2C we can see that third stress signal become fourth stressed test signal which is same as third stressed test signal).

(14) Regarding claim 15:

Wherein the apparatus monitors at least one of the first reference test signal, the second reference test signal, the first stressed test signal, the second stressed test signal, the third stressed test signal, and the fourth stressed test signal (attenuation, that

means transmission and reflection characteristic of a DUT, device under test are displayed on a cathode ray tube 20) (column 5, lines 6-15 and fig. 2C).

(15) Regarding claim 16:

Wherein the second output port (port from MACH-Zehnder optical modulator) is coupled to the second input port (12<sub>2</sub>) column 3, lines 46-55, column 4, lines 25-36, and fig. 2C).

(16) Regarding claims 17, 18 and 19:

Wherein the second output port is externally coupled to the second input port by a communication link under test has an optical media (lightwave receiver 16 operates with single-mode optical fiber cable and the lightwave source 14 and lightwave receiver 16 in a test setup; device under test (DUT) connected to the lightwave test port(s) 12.sub.1 and 12.sub.2) (column 4, lines 63-66, lines 9-15 and fig 2C),

(17) Regarding claim 20:

Wherein the communication device is at least one of:

an amplifier, a repeater, a coupler, and a polarizer (column 453, lines 30-51).

(18) Regarding claims 21, and 22 :

Wherein the third output port is externally coupled to the third input port (see fig 2C, third output port is coupled to third input port), the third output port is coupled to an external device under test (column 4, lines 63-66, lines 9-15, column 453, lines 1-15,30-50, and fig 2C),

(19) Regarding claim 24:

Wherein the external device under test inputs the third stressed test signal and outputs the fourth stressed test signal.

(20) Regarding claim 25:

Wherein the apparatus includes an internal receiver (column 1, lines 24-36).

(21) Regarding claim 26:

Wherein the apparatus comprises an internal receiver (column 1, lines 24-36)

(22) Regarding claim 27:

Wherein the internal receiver inputs the fourth stressed test signal (according to fig. 2C, signal passing through optical input 12<sub>2</sub> to internal receiver 16 which is giving a stress signal ) (column 1, lines 24-36, column 2, lines 54-60)

(23) Regarding claim 28:

A method comprising:

outputting a first reference test signal from a first output port (12<sub>1</sub>) of a communication testing device ( column 3, lines 46-55, column 4, lines 25-36, and fig. 2C),

inputting a second reference test signal into a first input port (12<sub>3</sub>) of the communication testing device,

outputting a first stressed test signal from a second output port (port from MACH-Zehnder optical modulator) of the communication testing device (column 3, lines 46-55, column 4, lines 25-36, and fig. 2C),

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hernday et al. (US Patent No.:5041997) in view of Telewski et al. (US Patent No.: 6021315).

Regarding claim 23 :

Hernday et al discloses all of the subject matter except doesn't specifically disclose an external receiver.

However, Telewski et al., in the same field of endeavor, discloses disclose an external receiver (column 5, lines 5-30, and fig. 3).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate an external receiver as taught by Telewski et al. into the system of Hernday et al so that a DUT can then be measured when it is connected to the test port of the light wave test set in a given measurement set up.. In combination these features will be improved accuracy, repeatability, and ease of use because convenience is realized in factory calibration, field service calibration, user calibration and its actual measurements.

**Conclusion**

6. Any inquiry concerning this communication should be directed to the examiner at (571) 270-1673 Monday- Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu, can be reached at (557) 272-3036.

Information regarding the status on an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (tool-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9799 (IN USA OR CANADA) or 571-272-1000.

**Any response to this action should be mailed to:**

Commissioner of patents and trademarks

Washington, D.C. 20231

**Or fax to:**

**(703)872-9314 (for Technology Center 2600 only)**

Shaheda Abdin



SHUWANG LIU  
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